

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

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### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

11.05.2004

Applicant's or agent's file reference  
YCT-759

S-38-266

### IMPORTANT NOTIFICATION

International application No.  
PCT/JP 02/13857

International filing date (day/month/year)  
27.12.2002

Priority date (day/month/year)  
28.12.2001

Applicant  
SUNTORY LIMITED

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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# PATENT COOPERATION TREATY



## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference YCT-759	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/JP 02/13857	International filing date ( <i>day/month/year</i> ) 27.12.2002	Priority date ( <i>day/month/year</i> ) 28.12.2001
International Patent Classification (IPC) or both national classification and IPC C07H17/04		
Applicant SUNTORY LIMITED		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.  
  
☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  11.07.2003	Date of completion of this report  11.05.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  de Nooy, A  Telephone No. +31 70 340-2338  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP 02/13857

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-49 as originally filed

**Claims, Numbers**

1-21 as originally filed

**Drawings, Sheets**

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP 02/13857

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	5-13, 15
	No: Claims	1-4, 14, 16-21
Inventive step (IS)	Yes: Claims	5-13, 15
	No: Claims	1-4, 14, 16-21
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/JP02/13857

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following document:

D1: JP53-98954

The document D1 was not cited in the international search report. A copy of the document is appended hereto.

**Novelty (Article 33(2) PCT)**

2-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid is considered being disclosed in D1. The document D1 (see description of the present application page 4 line 26) mentions this compound. Furthermore, it would be straightforward to chemically synthesise the compound from D1, even given the information that the 3'-O position of ascorbic acid is more reactive than the 2'-O position (see description of the present application page 5 lines 1-5), using protective groups to selectively protect the 3'-O position of ascorbic acid. Since the use of the glycosylated ascorbic acid derivatives in D1 is as vitamin C active substance (e.g. against oxidation), claims 1-4, 14, 16-21 lack novelty.

**Inventive step (Article 33(3) PCT)**

Document D1, which is considered to represent the most relevant state of the art, discloses  $\beta$ -glucopyranosyl derivatives of ascorbic acid, amongst others 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid, for the same use as the present application.

The problem to be solved by the present invention may therefore be regarded as the provision of further compounds which will form vitamin C in the body.

The solution proposed in claims 1-4, 14, 16-21 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: D1 provides the same solution to the same problem as the present application.

**Remark:**

If the applicant can show that, given D1, synthesising the above compound is not straightforward, novelty and inventive step could be recognized for all claims because: The above reasoning would not apply then and in that case 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid is not disclosed in D1 since it cannot be obtained from D1.